WHAT IS CLAIMED IS:

1. In a data processing environment, a method for synchronizing multiple data sets, the method comprising: o

establishing a data repository for facilitating synchronization of user information maintained among multiple data sets, said data repository storing user information from the data sets; 1

storing at least one mapping which specifies how user information may be transformed for storage at a given data set; 2

receiving a request for synchronizing at least one data set; 3

based on user information stored at said at least one data set and based on said at least one mapping, propagating to the data repository from each of at said at least one data set any changes made to the user information, to the extent that such changes can be reconciled with user information already present at said data repository; and

based on user information stored at said data repository and based on said at least one mapping, propagating to each of said at least one data set any changes to the user information which have been propagated to the data repository, to the extent that such changes are not present at said each data set. 5

2. The method of claim 1, wherein said step of propagating to the data repository comprises:

performing selected operations of adding, updating, and deleting information at the data repository, so that the data repository reflects changes made to user information at the data sets.

3. The method of claim 2, wherein said operation of deleting information comprises a logical delete operation of marking information as having been deleted.

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4. The method of claim 1, wherein said data repository stores user information that is a super-set of all user information stored at said multiple data sets.

5. The method of claim 1, wherein said data repository and said at least one mapping comprise a grand unification database, for facilitating synchronization among multiple data sets.

6. The method of claim 5, wherein one grand unification database is created for each type of user information which is to be synchronized.

7. The method of claim 6, wherein said environment includes types of user information selected from contact, calendar, and task-oriented information.

8. The method of claim 1, wherein a particular one of the data sets resides on a client device which is intermittently connected, and wherein said steps of propagating are deferred for the particular data set until the client device is actually connected.

9. The method of claim 1, wherein each data set comprises a plurality of data records, and wherein each data record is represented within the data repository.

10. The method of claim 9, wherein each of said data records is represented within the data repository by a corresponding data record having a unique identifier.

11. The method of claim 1, wherein each mapping comprises a mapping table storing a plurality of mapping entries, each mapping entry storing at least a first identifier for indicating a particular data record in the data repository which the entry is associated with, and a second identifier for indicating a particular data record at a particular data set which is the source for the user information.

12. The method of claim 11, wherein each mapping table is associated with a particular data set.

13. The method of claim 11, wherein each mapping entry stores particular information useful for determining when its associated user information was last modified.

14. The method of claim 13, wherein said particular information comprises a last-modified time stamp, derived at least in part from the client device where the associated user information was last modified.

15. The method of claim 13, wherein said particular information comprises a checksum value, for use with a data set residing at a client device that does not support time stamps.

16. The method of claim 1, wherein said step of propagating to each of said at least one data set comprises:

performing selected operations of adding, updating, and deleting information at each of said at least one data set, so that said each reflects changes made to user information at other data sets.

17. The method of claim 16, wherein said operation of deleting information comprises physically deleting information at said each data set.

18. The method of claim 1, wherein at least one of the said data sets functions, at least in part, as said data repository.

19. The method of claim 1, wherein user information is stored at the data repository as unformatted blob data.

20. The method of claim 19, further comprising:

providing at least one type module for facilitating interpretation of user information stored as unformatted blob data at the data repository.

21. A method for providing synchronization among an arbitrary number of clients, each client storing information in data records, the method comprising:

creating a reference database for storing a set of data records serving as a reference to corresponding data records stored at the clients;

creating a list of actions to perform, said list for storing instructions specifying that particular data records should be added, updated, or deleted at a particular client and storing instructions specifying that particular data records should be added, updated, or deleted at the reference database;

for each client,

determining all data records which have been updated, added, or deleted at the client since the client was last synchronized;

based on the data records determined to have been updated, added, or deleted at the client, posting to said list instructions to add, update, or delete corresponding data records stored at the reference database;

for each client,

determining all data records which have been updated, added, or deleted at the reference database since the client was last synchronized;

based on the data records determined to have been updated, added, or deleted at the reference database, posting to said list instructions to add, update, or delete corresponding data records stored at the client;

resolving any conflicts present in said list; and

synchronizing the clients by performing instructions remaining in said list.

22. The method of claim 21, wherein said step of determining all data records which have been updated, added, or deleted at the client includes first determining all data

records which have been updated and added, and thereafter determining all data records which have been deleted.

23. The method of claim 22, wherein said step of determining all data records which had been deleted includes:

first determining, based on record count, whether any records at all have been deleted.

24. The method of claim 21, wherein said resolving step includes:

prioritizing instructions in the list according to an action type; and

removing from the list any instruction rendered moot as a result of a conflicting instruction having a higher type.

25. The method of claim 21, wherein said reference database comprises a data set at one of the clients.

26. The method of claim 21, wherein said the arbitrary number of clients comprise three or more clients.

27. The method of claim 21, wherein said list of actions includes instructions selected from a client update, a client add, and a client delete, for a given data record.

28. The method of claim 21, wherein said list of actions includes instructions selected from a reference database update, a reference database add, and a reference database delete, for a given data record.

29. The method of claim 21, wherein each data record stored at the reference database is uniquely identified, so that it may be tracked at each client.

30. The method of claim 21, wherein an instruction to update the reference database takes precedence over other instructions.

31. The method of claim 21, wherein said instruction to delete a corresponding data record at the reference database comprises a logical delete operation of marking the record as having been deleted.

32. The method of claim 21, wherein said instruction to delete a corresponding data record at a client comprises a physical delete operation.

33. The method of claim 21, wherein said determining steps include using a mapping table for transforming information to and from a particular client.

34. The method of claim 21, wherein at least one of the clients is intermittently connected, so that certain instructions in the list are not executed until the client is again connected.

35. The method of claim 21, wherein information from data records is stored at the reference database as unformatted blob data.

36. A synchronization system providing synchronization of information among an arbitrary number of client devices, each client device storing information in data records, the system comprising:

a reference database for storing a set of data records serving as a reference to corresponding data records stored at the client devices; and

a synchronization engine for:

constructing a list of actions to perform, said list for storing instructions specifying that particular data records should be added, updated, or deleted at a

particular client device and storing instructions specifying that particular data records should be added, updated, or deleted at the reference database;

determining for each client device all data records which have been updated, added, or deleted at the client since the client was last synchronized, and based on that determination, posting to said list instructions to add, update, or delete corresponding data records stored at a reference database;

determining for each client device all data records which have been updated, added, or deleted at the reference database since the client was last synchronized, and based on that determination, posting to said list instructions to add, update, or delete corresponding data records stored at the client;

resolving any conflicts present in said list; and

synchronizing the clients by performing instructions remaining in said list.

37. The system of claim 36, wherein said reference database comprises a super-set of data records from the client devices.

38. The system of claim 36, further comprising:

plug-in type drivers for allowing each client device to process information of a particular type.

39. The system of claim 36, further comprising:

a client interface allowing a particular client device to register with the synchronization engine for obtaining synchronization services.

40. The system of claim 36, further comprising:

a record interface allowing a particular client device to read and write information of a particular record type.